

# **MD 337: NORTH OF MD 218 TO THE WEST GATE OF JOINT BASE ANDREWS (JBA) AIR QUALITY ANALYSIS OCTOBER 2012**

## **INTRODUCTION**

The purpose of the subject project is to improve the safety and operation of MD 337 in the vicinity of Joint Base Andrews, as well as to provide better pedestrian and bicycle access, all as required for the Base Realignment and Closure (BRAC) process. As part of BRAC, Andrews Air Force Base in Prince George's County, Maryland was renamed as Joint Base Andrews Naval Air Facility Washington (JBA) on October 1, 2009.

This report presents the results of a review of air quality impacts associated with the proposed widening and intersection improvements for MD 337 in Prince George's County, Maryland. This study is intended as an evaluation of the project level air quality impacts of the proposed improvements. This evaluation is provided to meet the requirements of the Clean Air Act (CAA) and the National Environmental Policy Act (NEPA).

The project consists of improvements to the intersection of MD 337 at MD 218 and to the I-495/I-95 northbound off-ramp to MD 337. At MD 218, southbound MD 337 will be widened to the west to accommodate two exclusive left turn lanes into JBA, two through lanes, and an exclusive right turn lane to westbound MD 218. Northbound MD 337 will be widened to accommodate an acceleration lane for a free right turn coming out of JBA. MD 218 westbound will be widened to accommodate two exclusive left turn lanes, two through lanes and a right turn lane. MD 218 eastbound will be widened to the south to allow for an exclusive free right turn lane. At the I-495/I-95 off-ramp the ramp and shoulder will be widened for an additional lane, accommodating two left-turn lanes and a shared left/right turn lane. In addition, the median break on MD 337 at the ramp will be widened to accommodate these ramp left-turn movements. The roadway and shoulder of MD 337 in the vicinity of the off-ramp will be widened to accommodate a third through lane on eastbound MD 337 to match the existing typical section east of the I-495/I-95 NB off-ramp. Between the two above discussed locations, the MD 337 pavement will be overlaid and continuous sidewalks will be added.

Land use in the vicinity of MD 337 is primarily commercial on the north side and Joint Base Andrews on the south. Commercial areas include a combination of retail, motel and food service uses. The overall study area is approximately 0.80 miles in length.

## **ENVIRONMENTAL ANALYSIS**

The Clean Air Act (CAA) Amendments of 1990 and the Final Transportation Conformity Rule [40 CFR Parts 51 and 93] direct the U.S. Environmental Protection Agency (EPA) to implement environmental policies and regulations that will ensure acceptable levels of air quality. Both the Clean Air Act and the Final Transportation Conformity Rule affect proposed transportation projects. To comply with the CAA, the Environmental Protection Agency (EPA) has issued Proposed Rules, a Guidance Clarifications, and Final Rules concerning the Conformity Determination of fine and coarse particulates (PM<sub>2.5</sub> and PM<sub>10</sub>); and Draft and Final Rules concerning quantitative analysis of CO and PM<sub>2.5</sub>. Following is a summary of recent rules and clarifications:

- Transportation Conformity Rule PM<sub>2.5</sub> and PM<sub>10</sub> Amendments; Proposed Rule
- Final PM Qualitative Guidance Clarification; June 12, 2009
- Final PM Conformity Rule; March 10, 2010 Draft Transportation Conformity Guidance for Quantitative Hot-spot Analyses in PM<sub>2.5</sub> and PM<sub>10</sub> Nonattainment and Maintenance Areas, May 26, 2010

- Final Transportation Conformity Guidance for Quantitative Hot- spot Analyses in PM<sub>2.5</sub> and PM<sub>10</sub> Nonattainment and Maintenance Areas, December 2010.
- Final Transportation Conformity Guidance for Quantitative Hot- spot Analyses in CO Nonattainment and Maintenance Areas, December 2010
- Transportation Conformity Rule Restructuring Amendments, March 2012
- Transportation Conformity Regulations as of April 2012, Proposed Rule Change, Annual PM<sub>2.5</sub> NAAQS

As required by the Clean Air Act, National Ambient Air Quality Standards (NAAQS) have been established for six major air pollutants. These pollutants, known as criteria pollutants, are carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), ozone (O<sub>3</sub>), particulate matter (PM<sub>10</sub> & PM<sub>2.5</sub>), sulfur dioxide (SO<sub>2</sub>), and lead (pb). These federal standards are summarized in **Table 1**. The "primary" standards have been established to protect the public health. The "secondary" standards are intended to protect the nation's welfare, and they account for air pollutant effects on soil, water, visibility, materials, vegetation, and other aspects of the general welfare.

**TABLE 1**  
**NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS)**

Pollutant	Primary/ Secondary	Primary Standards		Form
		Level	Averaging Time	
<b>Carbon Monoxide</b> 76 FR 66964	Primary	9 ppm	8-hour	Not to be exceeded more than once per year
		35 ppm	1-hour	
<b>Lead</b> 73 FR 669964	Primary and Secondary	0.15 µg/m	Rolling 3-Month Average	Not to be exceeded
<b>Nitrogen Dioxide</b> 75 FR 6464	Primary	100 ppb	1-hour	98 <sup>th</sup> percentile, averaged over 3 years
	Primary and Secondary	53 ppb	Annual	Annual Mean
<b>Particulate Matter (PM<sub>10</sub>)</b> 71 FR 61144	Primary and Secondary	150 µg/m	24-hour	Not to be exceeded more than once per year on average over 3 years
<b>Particulate Matter (PM<sub>2.5</sub>)</b> 71 FR 61144	Primary and Secondary	15 µg/m	Annual	Annual mean averaged over 3 years
		35 µg/m	24-hour	98 <sup>th</sup> percentile, averaged over 3 years
<b>Ozone</b> 73 FR 16436	Primary and Secondary	0.075 ppm	8-hour	Annual fourth highest daily maximum 8-hour concentration, averaged over 3 years
<b>Sulfur Dioxide</b> 75 FR 35520	Primary	75 ppb	1-hour	Not to be exceeded more than once per year
	Secondary	0.5 ppm	3-hour	

Section 107 of the 1977 Clean Air Act Amendment requires that EPA publish a list of all geographic areas in compliance with the NAAQS, as well as those areas not in compliance with the NAAQS. The designation of an area is made on a pollutant-by-pollutant basis. EPA's area designations consist of: Attainment, Unclassified, Maintenance, and Nonattainment. Ambient air quality is monitored through a network of stations to determine conditions throughout the country. EPA reviews the monitoring data, and areas where air pollution levels persistently exceed the NAAQS may be designated "nonattainment" for one or more

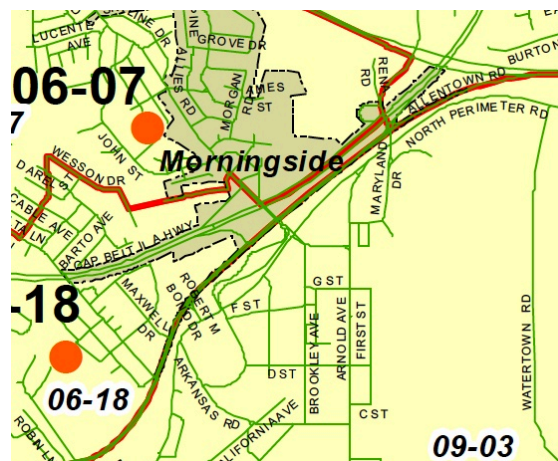
pollutants. After a nonattainment area improves conditions to meet the standard for a pollutant, it is re-designated as a maintenance area. Typically these designations are applied to entire counties or groups of counties.

In addition to the criteria pollutants for which there are NAAQS, EPA also regulates air toxics. Toxic air pollutants are those pollutants known or suspected to cause cancer or other serious health effects. Most air toxics originate from human-made sources, including on-road mobile sources, non-road mobile sources (e.g., airplanes), area sources (e.g., dry cleaners), and stationary sources (e.g., factories or refineries). The Clean Air Act (CAA) identified 188 air toxics. In 2001 EPA identified a list of 21 Mobile Source Air Toxics (MSAT), and highlighted six of these MSATs as “priority” MSAT.

Gases that trap heat in the atmosphere are often referred to as greenhouse gases (GHG). Greenhouse gases are necessary to life, as we know it, because they keep the planet’s surface warmer than it otherwise would be. This is referred to as the Greenhouse Effect. As concentrations of greenhouse gases are increasing; however, the Earth’s temperature appears to be increasing. The principal greenhouse gases that enter the atmosphere because of human activities include carbon dioxide, methane, nitrous oxide, and fluorinated gases.

The MD 337 Project is located in Prince George’s, Maryland, which is included as a part of the Washington, DC-MD-VA Metropolitan Statistical Area (MSA). The region has been classified as moderate nonattainment with respect to the eight-hour ozone standard and nonattainment of the 1997 fine particulate (PM<sub>2.5</sub>) standard. A portion of the MSA within Prince George’s County (Election Districts 2,6,12,16,17 & 18) had been non-attainment for carbon monoxide; however, this area has been re-designated as a CO Maintenance Area. As shown on Figure 1, MD 337 is the border between Election District 6 and Election District 9. Since a portion of the project is within Election District 6, the project should be considered to be in the CO Maintenance Area.

**FIGURE 1**



Transportation programs and plans must be evaluated for “conformity” to the applicable State Implementation Plan (SIP) provisions before projects can receive Federal funding. In addition, they must be in the current Constrained Long Range Plan (CLRP) and Transportation Improvement Program (TIP). A TIP generally presents projects anticipated over the next several years while a CLRP covers a longer period. A Metropolitan Planning Organization (MPO) is designated to develop the TIP and CLRP for a region, and to document their conformity with SIP provisions. For the Washington region, the National Capital Regional Transportation Planning Board (NC RTPB), which is part of the Metropolitan Washington Council of Governments (MWC OG), serves as the MPO for the MSA. Prince George’s County is a member of the MWC OG.

As the MPO, NC RTPB develops the TIP and CLRP the region, including Prince George’s County. Furthermore, it performs the related conformity analysis. The current CLRP, referred to as the 2012 *Constrained Long Range Plan* was adopted by NC RTPB on July 18, 2012. The latest TIP, covering the period 2013 to 2018, was adopted by NC RTPB on July 18, 2012. At a regional level, a project is considered to be conforming if it is a part of a conforming TIP and CLRP. The proposed project is listed in the 2012 CLRP and 2013-2018 TIP as ID: 5759.

## ENVIRONMENTAL CONSEQUENCES

In addition to the regional conformity analysis, any Federally funded project within a nonattainment or maintenance area for carbon monoxide or particulate matter must be analyzed at the project-level. At the project level, the pollutants could possibly have localized ("hot-spot") levels above the criteria. Since the MD 337 Project is in a CO maintenance area subject to the requirements of 40 CFR 93.116 concerning conformity determination, a CO project level analysis has been included. Also, since Prince George's County is a nonattainment area for PM<sub>2.5</sub>, a project-specific PM<sub>2.5</sub> assessment has also been provided.

The Division of Air Quality, within the Maryland Department of the Environment is responsible for implementing and enforcing regulations to ensure that the air that Maryland citizens breathe is clean and healthful. This mission is accomplished through several methods, including air pollution monitoring. The MDE CO air monitoring station nearest to the study area is located at the Howard University Laboratory in Beltsville, Maryland. The MDE PM<sub>2.5</sub> air monitoring station nearest to the study area is located at the Prince George's County Equestrian Center in Beltsville, Maryland. These sites are in EPA Region 3. Monitored air quality data within or near the study area for the years 2009-2011 is presented in **Table 2**

**TABLE 2  
POLLUTANT MONITORING**

			Site 240330030 Howard Univ. Laboratory 12003 Old Baltimore Pike Essex, MD			Site 240338003 Prince George's County Equestrian Center 14900 Pennsylvania Ave. Upper Marlboro, MD (Monitor #1/Monitor #2)		
			2009	2010	2011	2009	2010	2011
Carbon Monoxide [ppm]	1-Hour	Maximum	1.1	1.5	1.7	-	-	-
		2nd Maximum	1.1	1.3	1.3	-	-	-
	8-Hour	Maximum	0.9	1.0	1.1	-	-	-
		2nd Maximum	0.9	1.0	0.8	-	-	-
Particulate Matter [ug/m <sup>3</sup> ]	PM <sub>2.5</sub>	98th Percentile 24-Hour	18	20	22	19/15	21/19	21/15
		Mean Annual	8.7	9.4	8.7	8.9/8.8	9.5/10.1	8.9/7.8

### Carbon Monoxide (CO) Assessment

Portions of the Washington DC-MD-VA Metropolitan Statistical Area (MSA) are considered to be a maintenance area in terms of carbon monoxide (CO). Within Prince George's County, this maintenance area encompasses Election Districts 2,6,12,16,17 & 18, which previously had been in nonattainment. A portion of the MD 337 Project is in Election District 6, which is within in this CO maintenance area. Code of Federal Regulations Title 40, Part 93-Subpart A (40 CFR 93A) implements section 176(c) of the Clean Air Act (CAA), as amended (42 U.S.C. 7401 *et seq*). Paragraph 40 CFR 93.102 (b): *Geographic Applicability* states that the provisions of the subpart apply in all nonattainment and maintenance areas for transportation-related criteria pollutants for which the area is designated nonattainment or has a maintenance plan. Since the study area is

in a CO maintenance area, a project level hot-spot conformity determination in conformance with 40 CFR 93.116 is required. Therefore, a qualitative analysis considering local factors in conformance with 40 CFR 93.123(a)(2)(ii) is provided hereinafter.

A review of data provided, including traffic data, summarized in Table 3, demonstrates that the improvements to MD 337 will not result in significant traffic volumes, or changes in vehicle mix or other factors that would cause an increase in CO emissions relative to the No-build conditions.

As shown in Table 2, the maximum 2011 1-hour monitored CO concentrations is 1.7 ppm at MDE site 240330030, located at the Howard University Laboratory at 12003 Old Baltimore Pike in Beltsville, Maryland. This concentration is only 4.9 percent of the 1-hour CO NAAQS of 35.0 ppm. The maximum 2011 8-hour monitored CO concentration is 1.1 ppm at this same site, which is only 12.2 percent of the 8-hour NAAQS of 9.0 ppm.

In conclusion, because monitored CO emissions in the area are such a small percentage of the CO NAAQS, improvements to MD 337 from .26 miles north of MD 218 (Suitland Road) to the West Gate of Joint Base Andrews will not cause or contribute to a new violation of the CO NAAQS.

**TABLE 3 Traffic Data**

**MD 337 – 0.20 Mile North of MD 218 (Suitland Road)**

	Existing 2011	No-build 2031	Build 2031
ADT volumes	27,625	33,700	33,700
Percent Trucks	5%	5%	5%
Daily Truck Volumes (ADTT)	1,381	1,685	1,685

**I-95 Exit 9 Off-ramp: I-95/I-495 (OL) to MD 337**

	Existing 2011	No-build 2031	Build 2031
ADT volumes	5,750	8,550	8,550
Percent Trucks	3%	3%	3%
Daily Truck Volumes (ADTT)	173	257	257

**Particulate Matter (PM<sub>2.5</sub>)**

The project is located in Prince George's County, which is in the Washington DC-MD-VA Fine Particulate Matter (PM<sub>2.5</sub>) nonattainment area. This area was designated as nonattainment for PM<sub>2.5</sub>, based on 1997 NAAQS, on January 5, 2005 by EPA. This designation became effective on April 5, 2005, 90 days after EPA's published action in the Federal Register. Transportation conformity for the PM<sub>2.5</sub> standards applied on April 5, 2006, after the one-year grace period provided by the Clean Air Act. On November 13, 2009 EPA designated nonattainment areas based on the 2006 24-hour PM<sub>2.5</sub> NAAQS. The Washington DC-MD-VA region was not designated as nonattainment for the 2006 standard, therefore the designations based on the 1997 NAAQS remain in effect.

On March 10, 2006, EPA issued amendments to the Transportation Conformity Rule to address localized impacts of particulate matter: "*PM<sub>2.5</sub> and PM<sub>10</sub> Hot-Spot Analyses in Project-level Transportation Conformity Determinations for the New PM<sub>2.5</sub> and Existing PM<sub>10</sub> National Ambient Air Quality Standards*" (71 FR 12468). These rule amendments require the assessment of localized air quality impacts of Federally funded or approved transportation projects in PM<sub>10</sub> and PM<sub>2.5</sub> nonattainment and maintenance areas. On December 20,

2010, EPA issued “*Final Transportation Conformity Guidance for Quantitative Hot-spot Analyses in PM<sub>2.5</sub> and PM<sub>10</sub> Nonattainment and Maintenance Areas*”, (75 FR 79370), which helps state and local agencies complete quantitative PM<sub>2.5</sub> and PM<sub>10</sub> hot-spot analyses for project-level transportation conformity determinations of certain highway and transit projects. Because this guidance includes a two-year grace period until December 20, 2012, a quantitative analysis is not being provided for this project.

Projects that require hotspot analysis for PM<sub>2.5</sub> are those that are *Projects of Air Quality Concern* as enumerated in 40 CFR 93.123(b)(1):

- (i) *New highway projects that have a significant number of diesel vehicles, and expanded projects that have a significant increase in the number of diesel vehicles;*
- (ii) *Projects affecting intersections that are at Level-of-Service D, E, or F with a significant number of diesel vehicles, or those that will change to Level-of-Service D, E, or F because of increased traffic volumes from a significant number of diesel vehicles related to the project;*
- (iii) *New bus and rail terminals and transfer points that significantly increase the number of diesel vehicles congregating at a single location;*
- (iv) *Expanded bus and rail terminals and transfer points that significantly increase the number of diesel vehicles congregating at a single location; and*
- (v) *Projects in or affecting locations, areas, or categories of sites which are identified in the PM<sub>10</sub> or PM<sub>2.5</sub> applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violations.*

As discussed in the examples of the preamble to the March 10, 2006 Final Rule for PM<sub>2.5</sub> and PM<sub>10</sub> Hot-Spot Analyses in Project-Level Transportation Conformity Determinations (71 FR 12491), for projects involving the expansion of an existing highway, 40 CFR 93.123(b)(1)(i) has been interpreted as applying only to projects that would involve a significant increase in the number of diesel transit buses and diesel trucks on the existing facility.

Determination as to whether the MD 337 project is a *Project of Air Quality Concern* will be finalized by Interagency Consultation. To assist with the Interagency Consultation process, SHA has prepared the following assessment of the proposed improvements:

- The MD 337 Project is considered under the following paragraph of 40 CFR 93:
  - 40 CFR 92.123(b)(1)(i), as amended, which includes “*New highway projects that have a significant number of diesel vehicles, and expanded projects that have a significant increase in the number of diesel vehicles.*”
- The proposed improvements do not meet the criteria set forth in 40 CFR 93.123(b)(1)(i) to be considered a Project of Air Quality Concern based on the following considerations:
  - The project involves widening existing roadways to improve the safety and operation of MD 337 in the vicinity of Joint Base Andrews, as well as to provide better pedestrian and bicycle access, all as required for the Base Realignment and Closure (BRAC) process.
  - As shown in Table 3, MD 337, including the I-95/I-495 Exit 9 off-ramp, does not carry a significant number of truck traffic; nor will there be a significant increase in truck traffic.
  - Since the project consists primarily of safety improvements, it does not add through capacity to any road in the study area.
  - As discussed above, the construction will not result in meaningful changes between No-Build and Build traffic volumes, vehicle mix, or location of the existing facility. A review of the traffic data demonstrates that there will not be a “significant” increase in the number of trucks from the No-Build condition to the Build condition.
- Section 176(c) of the Clean Air Act and the Federal Conformity Rule require that transportation plans and programs conform to the intent of the air quality state implementation plan (SIP) through a regional emissions analysis in PM<sub>2.5</sub> nonattainment areas. The National Capital Regional Transportation Planning Board (NCRTPB) serves as the Metropolitan Planning Organization (MPO), and therefore it is responsible for the regional conformity determination.
- The currently approved Constrained Long Range Plan (CLRP), referred to as the *2012 Constrained Long Range Plan*, and the *2013-2018 Transportation Improvement Program (TIP)* have been determined to conform to the requirements of the Clean Air Act Amendments of 1990. These represent the currently conforming CLRP and TIP in accordance with 40 CFR 93.114. The MD 337 Project is included in the CLRP and TIP as ID: 5759

- The current conformity determination is consistent with the final conformity rule found in 40 CFR Parts 51 and 93. Conformity to the requirements of the Clean Air Act Amendments of 1990 means that the transportation activity will not cause new air quality violations, worsen existing violations, or delay timely attainment of the relevant NAAQS.
- Based on review and analysis as discussed above, it is determined that the proposed improvements of MD 337 from .26 miles north of MD 218 (Suitland Road) to the West Gate of Joint Base Andrews in Prince George's County will meet the Clean Air Act and 40 CFR 93.109 requirements for Fine Particulate Matter – PM<sub>2.5</sub>. These requirements are met without a PM<sub>2.5</sub> hot-spot analysis because the project has not been found to be a project of air quality concern as defined under 40 CFR 93.123(b)(1). The project will not cause or contribute to a new violation of the PM<sub>2.5</sub> NAAQS, or increase the frequency or severity of an existing violation.

## MSAT Assessment

The Federal Highway Administration (FHWA) *Guidance on Air Toxic Analysis in NEPA Documents* requires analysis of Mobile Source Air Toxics (MSAT) under specific conditions. The EPA has designated six prioritized MSATs, which are known or probable carcinogens or can cause chronic respiratory effects. The six prioritized MSATs are: benzene; acrolein; formaldehyde; 1,3-butadiene, acetaldehyde; and diesel exhaust (diesel exhaust gases and diesel particulate matter). The 2030 Build ADT on MD 337 will be 33,370, which is less than 140,000. Therefore in accordance with the above referenced guidance, the MD 337 Project would be a “minor widening project[s] and new interchange[s], such as those that replace(s) a signalized intersection on a surface street” ... “that serves to improve operations of highway.....without adding substantial new capacity or creating a facility that is likely to meaningfully increase emissions”. As such the MD 337 improvements would be considered a **Project with Low Potential MSAT Effects**.

### Project Specific MSAT Information:

The proposed roadway will have the effect of moving some traffic closer to nearby buildings and businesses; therefore, there may be localized areas where ambient concentrations of MSATs could be higher under Build Alternative than the No-Build Alternative. Although the magnitude and the duration of these potential increases cannot be accurately quantified due to the inherent deficiencies of current models, based on the traffic volumes (ADT) and truck percentages, the MD 337 improvements will not result in any meaningful changes in traffic volumes, vehicle mix, or any other factor that would cause a significant increase in emissions impacts. As such, this project will generate minimal air quality impacts for the Clean Air Act criteria pollutants and has not been linked with any special MSAT concerns. In addition, emissions would likely be lower in the design year than present levels as a result of EPA's national control programs that are projected to reduce MSAT emissions by 33 to 94 percent between 1999 and 2050 (see **Table 4**). Local conditions may differ from these national projections in terms of fleet mix and turnover, VMT growth rates, and local control measures; however, the magnitude of the EPA-projected reductions is so great (even after accounting for VMT growth) that MSAT emissions in the study area are likely to be lower in the future in nearly all cases.

**TABLE 4**  
NATIONAL MSAT EMISSION TRENDS 1999 - 2050 FOR VEHICLES OPERATING ON ROADWAYS  
USING EPA'S MOBILE6.2 MODEL

Pollutant/VMT	Pollutant Emissions (tons) and Vehicle-Miles Traveled (VMT) by Calendar Year												Reduction
	1999	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050	
Acrolein	2570	2430	1500	1000	814	775	783	824	889	970	1060	1160	-55%
Benzene	102000	98400	66700	38000	29200	27000	27200	28700	31000	33900	37000	40500	-60%
1,3-Butadiene	14400	13800	8620	5410	4640	4360	4390	4630	5010	5460	5970	6520	-55%
Diesel PM	139000	128000	91900	50000	22100	11400	8240	7080	6480	7070	7720	8440	-94%
Formaldehyde	50900	48800	30300	21400	18700	17800	18100	19000	20500	22400	24500	26800	-47%
Naphthalene	4150	4030	2610	1990	1770	1780	1890	2030	2200	2400	2620	2870	-31%
Polycyclic Organic Matter	561	541	343	259	231	233	246	265	286	313	341	373	-33%
Trillions VMT	2.69	2.75	2.94	3.24	3.55	3.88	4.24	4.63	5.05	5.51	6.02	6.58	145%

#### Unavailable or Incomplete Information:

Available technical tools do not enable us to predict the project-specific health impacts of the emission changes associated with the Build Alternative. Due to these limitations, the following limited discussion is included in accordance with CEQ regulations (40 CFR 1502.22(b)) regarding incomplete or unavailable information. Evaluating the environmental and health impacts from MSATs on a proposed highway project would involve several key elements, including emissions modeling, dispersion modeling to estimate ambient concentrations resulting from the estimated emissions, exposure modeling to estimate human exposure to the estimated concentrations, and then a final determination of health impacts based on the estimated exposure. Each of these steps is encumbered by technical shortcomings or uncertain science that prevents a more complete determination of the MSAT health impacts of this project.

#### Summary of Existing Credible Scientific Evidence Relevant to Evaluating the Impacts of MSATs:

Research into the health impacts of MSATs is ongoing. For different emission types, a variety of studies show that some either are statistically associated with adverse health outcomes through epidemiological studies (frequently based on emissions levels found in occupational settings) or that animals demonstrate adverse health outcomes when exposed to large doses.

Exposure to toxics has been a focus of a number of EPA efforts. Most notably, the agency conducted the National Air Toxics Assessment (NATA) in 1996 to evaluate modeled estimates of human exposure applicable to the county level. While not intended for use as a measure of, or benchmark for, local exposure, the modeled estimates in the NATA database best illustrate the levels of various toxics when aggregated to a national or state level. The EPA is in the process of assessing the risks of various kinds of exposures to these pollutants. The EPA Integrated Risk Information System (IRIS) is a database of human health effects that may result from exposure to various substances found in the environment. The IRIS database is located at <http://www.epa.gov/iris>.

#### Sensitive Receptor Assessment:

There may be localized areas where ambient concentrations of MSAT are slightly higher in any build scenario than in the no build scenario. Dispersion studies have shown that air toxics from the roadway start to drop off at about 100 meters. By 500 meters, most studies have found it very difficult to distinguish the roadway air toxic concentrations from background air toxic concentrations in any given area. Sensitive receptors include those facilities most likely to contain large concentrations of the more sensitive population (hospitals, schools, licensed day cares, and elder care facilities). An assessment of potential sensitive receptors within both 100 and 500 meters reveals that there are no sensitive receptors within 100 meters or 500 meters of MD 337 within the study area.

#### Summary:

Because of the uncertainties outlined above, a quantitative assessment of the effects of air toxic emissions impacts on human health cannot be made at the project level. While available tools may allow us to reasonably predict relative emissions changes among alternatives for larger projects, the amount of MSAT emissions released and MSAT concentrations or exposures created from small projects or from each of the project alternatives for large projects cannot be predicted with enough accuracy to be useful in estimating health impacts. Therefore, the relevance of the unavailable or incomplete information is that it is not possible to make a determination of whether MSAT from the proposed project would have significant adverse impacts on the human environment.

### **Greenhouse Gas Assessment**

From a NEPA perspective, it is analytically problematic to conduct a project level cumulative effects analysis of greenhouse gas emissions on a global-scale problem. Secondly, while Criteria Pollutant emissions last in the atmosphere for months, CO<sub>2</sub> emissions remain in the atmosphere far longer - over 100 years - and therefore require a much more sustained, intergenerational effort. Finally, due to the interactions between elements of

the transportation system as a whole, project-level emissions analyses would be less informative than ones conducted at regional, state, or national levels. Because of these concerns, FHWA concludes that the CO<sub>2</sub> emissions cannot be usefully evaluated in the same way that other vehicle emissions are addressed. However, it can be stated that estimates of CO<sub>2</sub> emissions, a primary factor in greenhouse gases, are based on the amount of direct energy required. The direct energy values represent the energy required for vehicle propulsion. This energy is a function of traffic characteristics such as volume, speed, distance traveled, vehicle mix, and thermal value of the fuel being used. A review of traffic data for the project reveals that, because there will not be a significant change in traffic volumes from the No-build to Build conditions, CO<sub>2</sub> emission burdens will most likely result in almost no change as compared to the existing conditions.

In 2009, Maryland Governor Martin O'Malley and the Maryland General Assembly passed the Greenhouse Gas Emission Reduction Act of 2009 (GGRA). The law requires the State to develop and implement a Plan (the GGRA Plan or the Plan) to reduce greenhouse gas (GHG) emissions 25 percent from a 2006 baseline by 2020. The Draft Plan in response to the GGRA was published on December 31, 2011. The Draft Plan puts the State on track to achieve the 25 percent GHG reduction required by the law while also creating jobs and improving Maryland's economy. The Plan also will help with other environmental priorities, including restoration of the Chesapeake Bay, improving air quality and other critical energy and national security issues. The Final Plan will be published prior to December 31, 2012.

### **Construction Impacts**

The construction phase of the proposed project has the potential to impact the local ambient air quality by generating fugitive dust through activities such as demolition and materials handling. The State Highway Administration has addressed this possibility by establishing "Specifications for Construction and Materials" which specifies procedures to be followed by contractors involved in site work. The Maryland Air and Radiation Management Administration was consulted to determine the adequacy of the "Specifications" in terms of satisfying the requirements of the "Regulations Governing the Control of Air Pollution in the State of Maryland". The Maryland Air and Radiation Management Administration found the specifications to be consistent with the requirements of these regulations. Therefore, during the construction period, all appropriate measures (Code of Maryland Regulations 10.18.06.03 D) would be incorporated to minimize the impact of the proposed transportation improvements on the air quality of the area. Mobile source emissions can also be minimized during construction by not permitting idling delivery trucks or other equipment during periods of unloading or other non-active use. The existing number of traffic lanes should be maintained during construction, to the maximum extent possible, and construction schedules should be planned in a manner that will not create traffic disruption and increase air pollutants. Application of these measures will ensure that construction impact of the project is insignificant.

### **Agency Coordination/Interagency Consultation**

(Note: Interagency Consultation section to be added after review by agencies)

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HP-01 TO HP-03	ROADWAY PROFILES
MOT-01 TO MOT-26	MAINTENANCE OF TRAFFIC PLANS



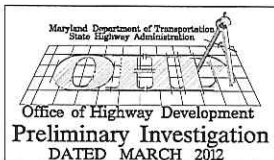
## Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION PLANS OF PROPOSED HIGHWAY

S.H.A. CONTRACT NO. PG7802170

FEDERAL AID PROJECT NO. : TBD

BRAC: MD 337 (ALLENTOWN ROAD) AT MD 218 (SUITLAND ROAD)

PRELIMINARY  
NOT FOR CONSTRUCTION



### JACOBS

Jacobs Engineering Group Inc.  
100 South Charles Street  
Tower Two, Suite 1000  
Baltimore, Maryland 21201  
410-837-5840 Fax: 410-837-3277  
www.Jacobs.com

\*PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. \_\_\_\_\_ EXPIRATION DATE: \_\_\_\_\_

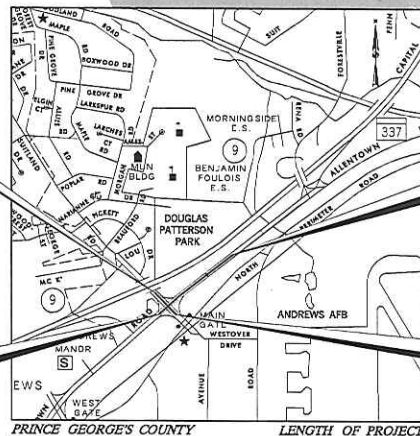
K-O-W PLAT NUMBERS	SURVEY BOOK NUMBERS
	31771
	31917
	31782
	31013

**LIMIT OF WORK**  
PG7802170  
MD 218 (SUITLAND RD)  
STA. 402+85.10

**LIMIT OF WORK**  
PG7802170  
MD 337 (ALLENTOWN RD)  
STA. 204+00.00

**LIMIT OF WORK**  
PG7802170  
MD 337 (ALLENTOWN RD)  
STA. 221+00.00

**LIMIT OF WORK**  
PG7802170  
MD 218 (SUITLAND RD)  
STA. 408+00.00



LENGTH OF PROJECT:  
MD 337 = 0.32 MILES  
MD 218 = 0.10 MILES  
SCALE: 1"=1000'

HORIZONTAL DATUM	NAD 83 / 91
VERTICAL DATUM	NAVD 88

### DESIGN DESIGNATION

ROADWAY	MD 337 (ALLENTOWN ROAD)	MD 218 (SUITLAND ROAD)
CONTROLS / YEARS	2011 2030	2011 2030
AVERAGE DAILY TRAFFIC (A.D.T.)	31,275	21,475
DESIGN HOURLY VOLUME (D.H.V.)	9%	9%
DIRECTIONAL DISTRIBUTION	61/39	60/40
% TRUCKS - A.D.T.	2%	1%
% TRUCKS - D.H.V.	2%	1%
DESIGN SPEED M.P.H.	45 MPH	40 MPH
FUNCTIONAL CLASSIFICATION	MINOR ARTERIAL	MINOR ARTERIAL
CONTROL OF ACCESS	NONE	NONE
INTENSITY OF DEVELOPMENT	URBAN	URBAN
TERRAIN	ROLLING	ROLLING
ANTICIPATED POSTED SPEED	40 MPH	35 MPH

### REVISIONS

NOTE:  
See Sheet No. 2 for List of Revised Sheet Numbers

### AASHTO DESIGN CRITERIA

THIS PROJECT WAS DESIGNED IN ACCORDANCE WITH THE 2001 PUBLICATION OF AASHTO'S "A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS."

### STANDARD SPECIFICATIONS BOOK, BOOK OF STANDARDS AND MUTCD

ALL WORK ON THIS PROJECT SHALL CONFORM TO: THE MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION SPECIFICATIONS ENTITLED STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, DATED JULY 2008 REVISIONS THEREOF OR ADDITIONS THEREON. THE SPECIAL PROVISIONS INCLUDED IN THE INVITATION FOR BIDS BOOK, THE ADMINISTRATIONS BOOK OF STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES AND THE LATEST MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

### RIGHT OF WAY

RIGHT OF WAY AND EASEMENT LINES SHOWN ON THESE PLANS ARE FOR ASSISTANCE IN INTERPRETING THE PLANS. THEY ARE NOT OFFICIAL. FOR OFFICIAL PERMIT OF WAY AND EASEMENT INFORMATION, SEE APPROPRIATE RIGHT OF WAY PLATS.

### UTILITIES

THE LOCATION OF UTILITIES SHOWN ON THE PLANS ARE FOR INFORMATION AND GUIDANCE ONLY. NO GUARANTEE IS MADE OF THE ACCURACY OF SAID LOCATIONS.

### COMPLETENESS OF DOCUMENTS

THE STATE HIGHWAY ADMINISTRATION SHALL ONLY BE RESPONSIBLE FOR THE COMPLETENESS OF DOCUMENTS OBTAINED DIRECTLY FROM THE STATE HIGHWAY ADMINISTRATION'S CHIEF'S OFFICE. FAILURE TO ATTACH ADDENDA MAY CAUSE THE BID TO BE IRREGULAR.

### ADA COMPLIANCE

THE DESIGN OF THIS PROJECT HAS INCORPORATED FACILITIES FOR THE ELDERLY AND HANDICAPPED IN COMPLIANCE WITH THE STATE AND FEDERAL LEGISLATION.

### ENVIRONMENTAL INFORMATION

MDE # XX-XX-XXXX  
ALL STATEWIDE MANAGEMENT FACILITIES CONSTRUCTED FOR CONTRACT NO. PG7802170 SHALL BE INSPECTED AND MAINTAINED IN ACCORDANCE WITH THE STATE HIGHWAY ADMINISTRATION'S BEST MANAGEMENT PRACTICES (BMP), INSPECTION AND REMEDIATION PROGRAM.

SEDIMENT AND EROSION CONTROL REGULATIONS WILL BE STRICTLY ENFORCED DURING CONSTRUCTION.

### STANDARD STABILIZATION NOTE:

FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN SEVEN (7) CALENDAR DAYS AS TO THE SURFACE OF ALL PERMETER CONTROLS, DITCHES, SWALES, DITCHES, PERMETER SLOPES, AND ALL SLOPES GREATER THAN 1:1 HORIZONTAL TO 1 VERTICAL, SIX (6) AND FOURTEEN (14) DAYS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

### OWNERS / DEVELOPERS CERTIFICATION:

I / WE HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION AND/OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I HEREBY AUTHORIZE THE RIGHT OF ENTRY FOR PERIODIC ON-SITE EVALUATION BY STATE OF MARYLAND, DEPARTMENT OF THE ENVIRONMENT, COMPLIANCE INSPECTORS.

REVIEWED AND APPROVAL RECOMMENDED DATE

CHIEF, HIGHWAY DESIGN DIVISION

APPROVAL RECOMMENDED DATE

DIRECTOR, OFFICE OF HIGHWAY DEVELOPMENT

APPROVED DATE

DEPUTY ADMINISTRATION / CHIEF ENGINEER FOR PLANNING, ENGINEERING, DESIGN, TRAFFIC AND SURVEILLANCE

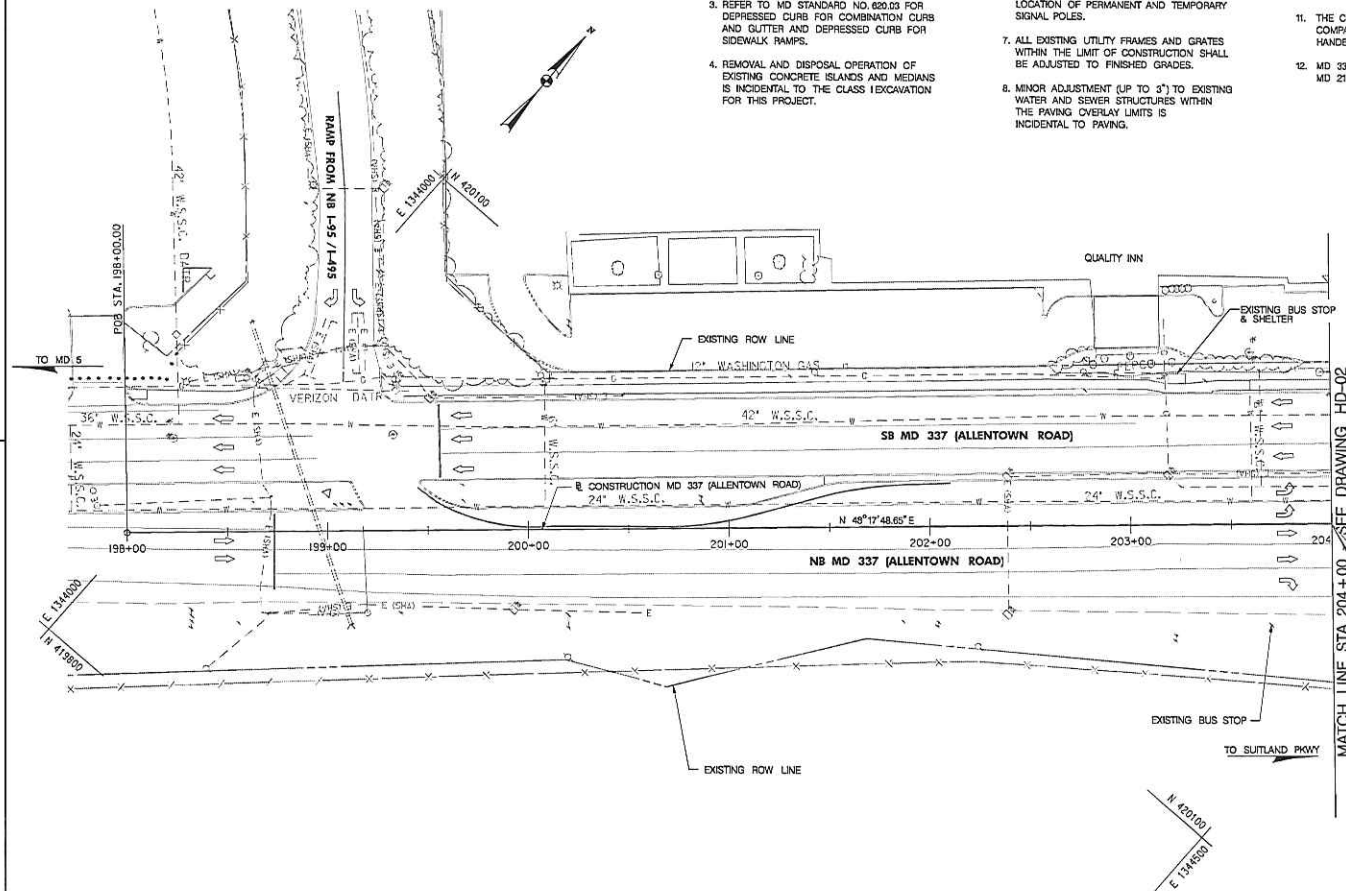
SURVEY BOOK NO.

P:\50463000\700acda\700ch\Task 10\CA-7001-MCOTSR.dgn  
Thursday, March 01, 2012 AT 02:48 PM

INDEXED

# NOTES:

1. ALL DIMENSIONS AND OFFSET VALUES SHOWN ARE TO THE EDGE OF GUTTER PAN. ALL RADIUS VALUES ARE SHOWN TO THE FACE OF CURB.
2. PROVIDE A 4'-0" NOSE DOWN AT APPROACH END OF MEDIANS, AS SHOWN ON MD STANDARD NO. 645.01.
3. REFER TO MD STANDARD NO. 620.03 FOR DEPRESSED CURB FOR COMBINATION CURBS AND GUTTER AND DEPRESSED CURB FOR SIDEWALK RAMP.
4. REMOVAL AND DISPOSAL OPERATION OF EXISTING CONCRETE ISLANDS AND MEDIANS IS INCIDENTAL TO THE CLASS 1 EXCAVATION FOR THIS PROJECT.
5. UNLESS OTHERWISE INDICATED ON THE PLANS ALL EXISTING COMMERCIAL SIGNS, CONCRETE FOUNDATION AND ELECTRICAL WIRING WITHIN THE L.O.D. WILL BE REMOVED BY THE CONTRACTOR. REMOVAL OF THESE ITEMS WILL BE INCIDENTAL TO CLEARING & GRUBBING PAY ITEM.
6. COORDINATE WITH SHA-COTS FOR REMOVAL AND LOCATION OF PERMANENT AND TEMPORARY SIGNAL POLES.
7. ALL EXISTING UTILITY FRAMES AND GRATES WITHIN THE LIMIT OF CONSTRUCTION SHALL BE ADJUSTED TO FINISHED GRADES.
8. MINOR ADJUSTMENT (UP TO 3") TO EXISTING WATER AND SEWER STRUCTURES WITHIN THE PAVING OVERLAY LIMITS IS INCIDENTAL TO PAVING.
9. WHERE PROPOSED CURB BEGINS OR ENDS, THE CURB SHALL BE NOSED DOWN OVER A LENGTH OF 8 FEET.
10. WHERE EXISTING CURB AND GUTTER WILL BE REMOVED AND REPLACED WITHOUT PROPOSED WIDENING, SAWCUT FULL DEPTH UP TO ONE FOOT MAXIMUM FROM THE EDGE OF THE GUTTER PAN FULL DEPTH SAWCUT PAYMENT WILL BE INCIDENTAL TO THE CLASS OF EXCAVATION.
11. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES FOR THE ADJUSTMENT OF EXISTING MAN-HOLES, HANDBOXES, VALVES, ETC.
12. MD 337 TRAVELS IN THE NORTH TO SOUTH DIRECTION AND MD 218 TRAVELS IN THE EAST TO WEST DIRECTION.



SEE DRAWING HD-02  
MATCH LINE STA. 204+00

**LIMIT OF WORK**  
CONTRACT # PG7802170  
MD 337 (ALLENTOWN ROAD)  
STA. 204+00.00

**SHA** STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
HIGHWAY DESIGN DIVISION

BRAC: MD 337 (ALLENTOWN ROAD)  
AT MD 218 (SUITLAND ROAD)

ROADWAY PLAN			
SCALE 1" = 30'	DATE MARCH 2012	CONTRACT NO. PG7802170	
DESIGNED BY E.G.	COUNTY PRINCE GEORGE'S		
DRAWN BY S.L.M.	LDMILE		
CHECKED BY S.A.S.			
F.A.P. NO.			
DRAWING NO. HD-01	OF 05	SHEET NO. 08 OF 41	

CROSS REFERENCE	SHEET NOS.
TYPICAL SHEETS	3-4
GEOMETRIC LAYOUT SHEETS	5
ROADWAY DETAILS	6-7
ROADWAY PLAN SHEETS	8-12
ROADWAY PROFILE SHEETS	13-15
TRAFFIC CONTROL SHEETS	16-4
PPE & DRAINAGE SCHEDULE	-
EROSION & SEDIMENT CONTROL	-
SIGNING & MARKING PLANS	-
LANDSCAPE PLAN SHEETS	-
UTILITIES	-

**PI PLANS**  
NOT FOR CONSTRUCTION

PLOTTED: THURSDAY, MARCH 01, 2012 AT 2:04 PM  
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## JACOBS

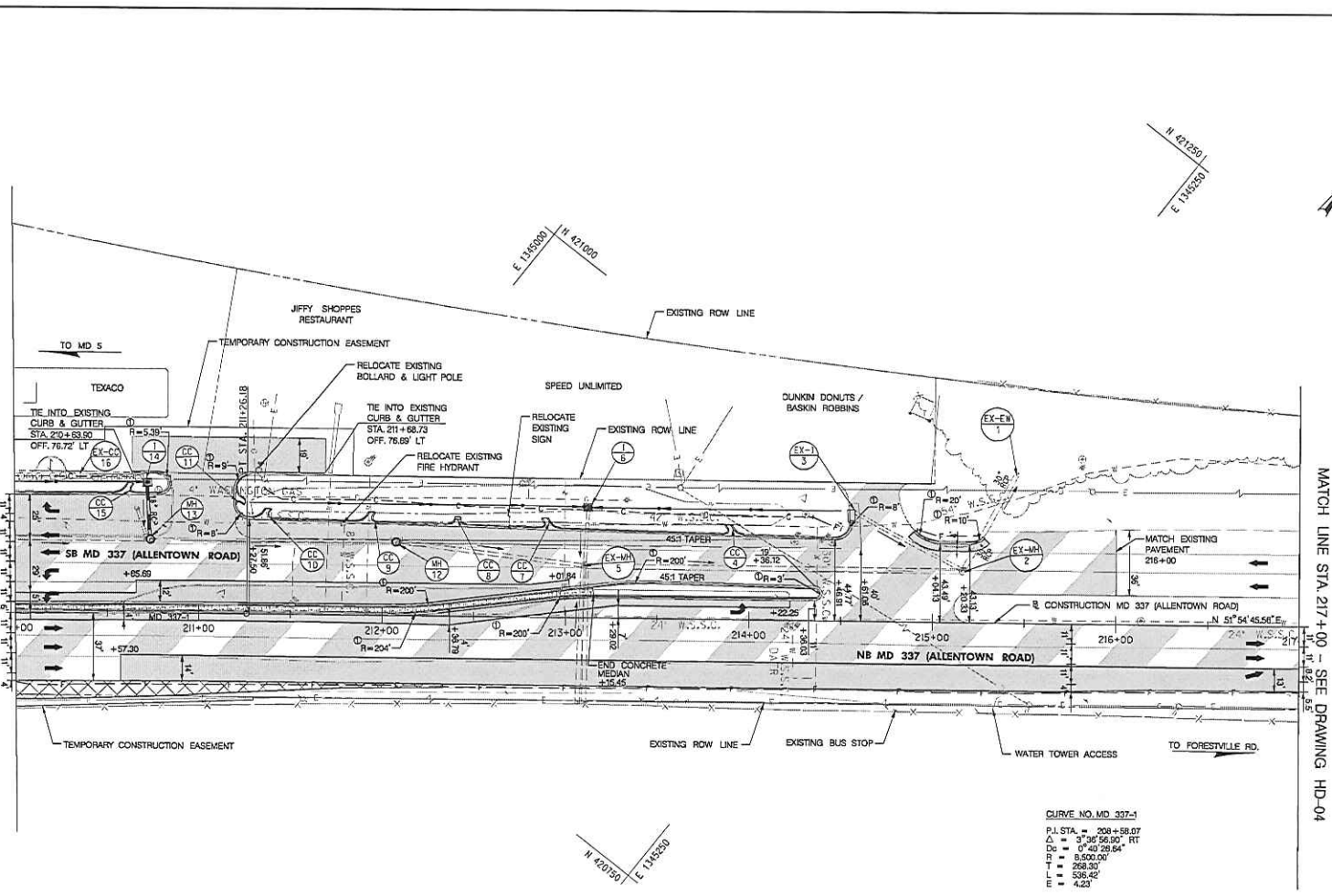
Jacobs Engineering Group Inc.  
100 South Charles Street  
Tower Two, Suite 1000  
Baltimore, Maryland 21201  
410-837-5840 Fax: 410-837-3277  
www.jacobs.com

### NOTES:

1. SEE DETAIL SHEETS FOR CURB RETURN INFORMATION INCLUDING STATIONS, OFFSETS AND ELEVATIONS.

BY: MACKEL SL





MATCH LINE STA 210+00 - SEE DRAWING HD-02

MATCH LINE STA 217+00 - SEE DRAWING HD-04

CURVE NO. MD 337-1  
 P.I. STA. = 208+58.07  
 $\Delta = 37^{\circ}00'56.00"$  RT  
 $D_c = 0^{\circ}40'28.64"$   
 $R = 8,500.00'$   
 $T = 268.30'$   
 $L = 536.42'$   
 $E = 4.23'$

LEGEND

- CONCRETE SIDEWALK / MEDIAN
- FULL DEPTH CONSTRUCTION
- GRINDING AND RESURFACING / WEDGE AND LEVEL
- PAVEMENT REMOVAL
- CONCRETE ENTRANCE

NOTES:  
 ① SEE DETAIL SHEETS FOR CURB RETURN INFORMATION INCLUDING STATIONS, OFFSETS AND ELEVATIONS.  
 SEE HD-01 FOR ADDITIONAL NOTES.

**JACOBS**  
 Jacobs Engineering Group Inc.  
 100 South Charles Street  
 Tower Two, Suite 1000  
 Baltimore, Maryland 21201  
 410-837-5840 Fax: 410-837-3277  
 www.jacobs.com

BY: MACKELSL

CROSS REFERENCE	SHEET NOS.
TYPICAL SHEETS	3-4
GEOMETRIC LAYOUT SHEETS	5
ROADWAY DETAILS	6-7
ROADWAY PLAN SHEETS	8-12
ROADWAY PROFILE SHEETS	13-15
TRAFFIC CONTROL SHEETS	16-41
PPE & DRAINAGE SCHEDULE	-
EROSION & SEDIMENT CONTROL	-
SIGNALS & MARKING PLANS	-
LANDSCAPE PLAN SHEETS	-
UTILITIES	-

R/W PLAT NUMBER  
 REVISIONS  
**PI PLANS  
 NOT FOR CONSTRUCTION**

**SHA** STATE OF MARYLAND  
 DEPARTMENT OF TRANSPORTATION  
 STATE HIGHWAY ADMINISTRATION  
 HIGHWAY DESIGN DIVISION

BRAC: MD 337 (ALLENTOWN ROAD)  
 AT MD 218 (SUTLAND ROAD)

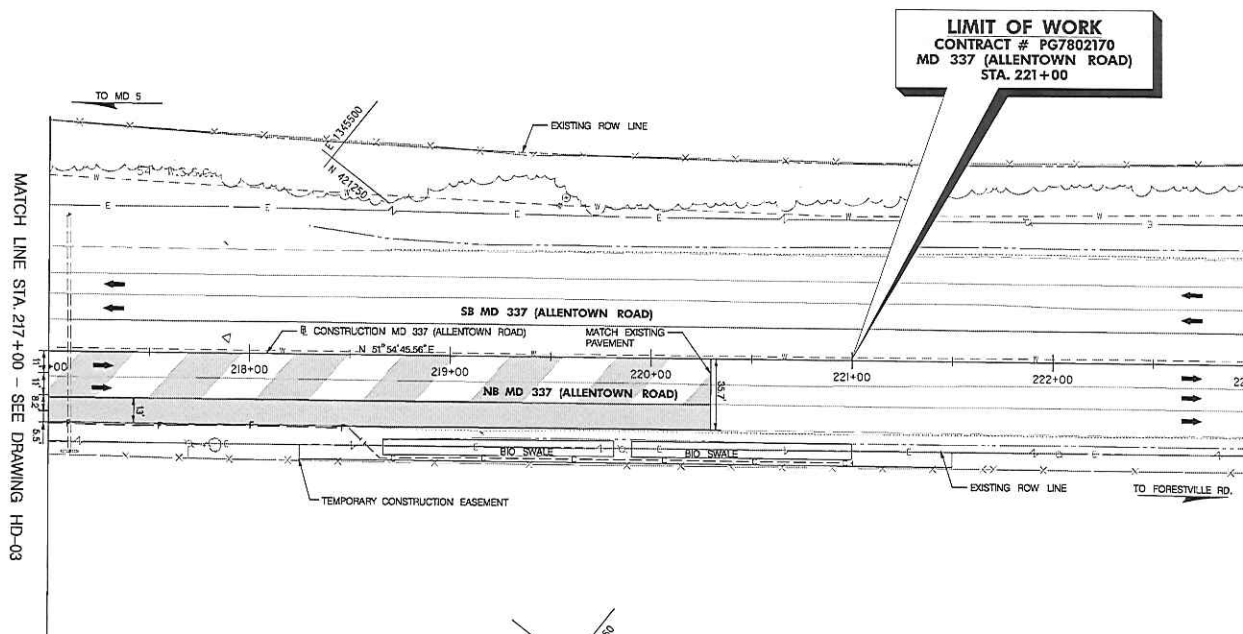
**ROADWAY PLAN**

SCALE 1" = 30' DATE MARCH 2012 CONTRACT NO. PD780217D

DESIGNED BY E.G. COUNTY PRINCE GEORGE'S  
 DRAWN BY S.J.M. LODHLE  
 CHECKED BY S.A.S.  
 F.A.P. NO.

DRAWING NO. **HD-03** OF **05** SHEET NO. **10** OF **41**

PLOTTED: THURSDAY, MARCH 01, 2012 AT 2:06 PM  
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**SHA** STATE OF MARYLAND  
 DEPARTMENT OF TRANSPORTATION  
 STATE HIGHWAY ADMINISTRATION  
 HIGHWAY DESIGN DIVISION

BRAC: MD 337 (ALLENTOWN ROAD)  
 AT MD 218 (SUITLAND ROAD)

**ROADWAY PLAN**

SCALE: 1" = 30' DATE: MARCH 2012 CONTRACT NO. PG7802170

DESIGNED BY: E.G. COUNTY: PRINCE GEORGE'S

DRAWN BY: S.L.M. LOGMILE

CHECKED BY: S.A.S.

F.A.P. NO.

DRAWING NO. HD-04 OF 05 SHEET NO. 11 OF 41

**JACOBS**  
 Jacobs Engineering Group Inc.  
 100 South Charles Street  
 Tower Two, Suite 1000  
 Baltimore, Maryland 21201  
 410-837-6340 Fax: 410-837-3277  
 www.Jacobs.com

BY: MACKELSL



INDEX OF SHEETS  
SEE SHEET 2

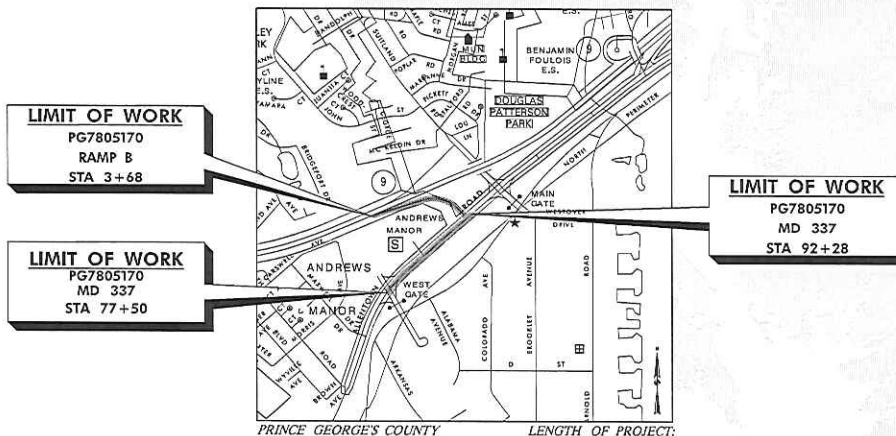


Maryland Department of Transportation  
STATE HIGHWAY ADMINISTRATION  
PLANS OF PROPOSED HIGHWAY

S.H.A. CONTRACT NO. PG7805170

FEDERAL AID PROJECT NO.

MD 337 (ALLENTOWN ROAD) AT I-495 / I-95 NB OFF-RAMP  
BRAC - INTERSECTION CAPACITY IMPROVEMENTS



HORIZONTAL DATUM NAD 83 / 91  
VERTICAL DATUM NAVD 88

1000 0 1000 2000 feet

DESIGN DESIGNATION				
ROADWAY	EXIT 9: I-495 / I-95 NB OFF RAMP		MD 337 (ALLENTOWN ROAD)	
CONTROLS / YEARS	2011	2031	2011	2031
AVERAGE DAILY TRAFFIC (A.D.T.)	5,750	8,550	27,625	33,700
DESIGN HOURLY VOLUME (D.H.V.)	11%	11%	8%	8%
DIRECTIONAL DISTRIBUTION	100%	100%	54%	54%
% TRUCKS - A.D.T.	3%	3%	5%	5%
% TRUCKS - D.H.V.	3%	3%	3%	3%
DESIGN SPEED M.P.H.	40 MPH		45 MPH	
FUNCTIONAL CLASSIFICATION	INTERSTATE		INTERSTATE	
CONTROL OF ACCESS	FULL CONTROL		UNCONTROLLED	
INTENSITY OF DEVELOPMENT	URBAN			
TERRAIN	ROLLING			
ANTICIPATED POSTED SPEED	30 MPH (CAUTIONARY)		40 MPH	

REVISIONS

NOTE:  
See Sheet No. 2 for List of Revised Sheet Numbers

AASHTO DESIGN CRITERIA

THIS PROJECT WAS DESIGNED IN ACCORDANCE WITH THE 301 PUBLICATION OF AASHTO'S "A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS."

STANDARD SPECIFICATIONS BOOK,  
BOOK OF STANDARDS AND MUTCD

ALL WORK ON THIS PROJECT SHALL CONFORM TO: THE MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATIONS SPECIFICATIONS ENTITLED STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS DATED JULY 2008 PERIODS THEREOF OR ADDITIONS THERETO. THE SPECIAL PROVISIONS INCLUDED IN THE INVITATION FOR BIDS BOON THE ADMINISTRATIONS BOOK OF STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES AND THE LATEST MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

RIGHT OF WAY

RIGHT OF WAY AND EASEMENT LINES SHOWN ON THESE PLANS ARE FOR ASSISTANCE IN INTERPRETING THE PLANS. THEY ARE NOT OFFICIAL. FOR OFFICIAL RIGHT OF WAY AND EASEMENT INFORMATION, SEE APPROPRIATE RIGHT OF WAY PLATS.

UTILITIES

THE LOCATION OF UTILITIES SHOWN ON THE PLANS ARE FOR INFORMATION AND GUIDANCE ONLY. NO GUARANTEE IS MADE OF THE ACCURACY OF SAID LOCATIONS.

COMPLETENESS OF DOCUMENTS

THE STATE HIGHWAY ADMINISTRATION SHALL ONLY BE RESPONSIBLE FOR THE COMPLETENESS OF DOCUMENTS OBTAINED DIRECTLY FROM THE STATE HIGHWAY ADMINISTRATION'S CASHIER'S OFFICE. FAILURE TO ATTACH ADDENDA MAY CAUSE THE BID TO BE IRREGULAR.

ADA COMPLIANCE

THE DESIGN OF THIS PROJECT HAS INCORPORATED FACILITIES FOR THE ELDERLY AND HANDICAPPED IN COMPLIANCE WITH THE STATE AND FEDERAL LEGISLATION.

ENVIRONMENTAL INFORMATION

MDE # ##-XX-####

ALL STORMWATER MANAGEMENT FACILITIES CONSTRUCTED FOR CONTRACT NO. PG7805170 SHALL BE INSPECTED AND MAINTAINED IN ACCORDANCE WITH THE STATE HIGHWAY ADMINISTRATIONS BEST MANAGEMENT PRACTICES (BMP), INSPECTION AND MAINTENANCE PROGRAM.

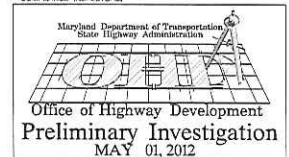
SEDIMENT AND EROSION CONTROL REGULATIONS WILL BE STRICTLY ENFORCED DURING CONSTRUCTION.

STANDARD STABILIZATION NOTE:

FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN SEVEN (7) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROL DITCHES, DRAINAGE DITCHES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1), AND FOURTEEN DAYS PRIOR TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

OWNERS / DEVELOPERS CERTIFICATION:

I, WE HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION AND/OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION. BEFORE BEGINNING THE PROJECT, I HEREBY AUTHORIZE THE RIGHT OF ENTRY FOR PERIODIC ON-SITE EVALUATION BY STATE OF MARYLAND DEPARTMENT OF THE ENVIRONMENT, COMPLIANCE INSPECTORS.



REVIEWED AND APPROVAL RECOMMENDED DATE

CHIEF, HIGHWAY DESIGN DIVISION

APPROVAL RECOMMENDED DATE

DIRECTOR OFFICE OF HIGHWAY DEVELOPMENT

APPROVED DATE

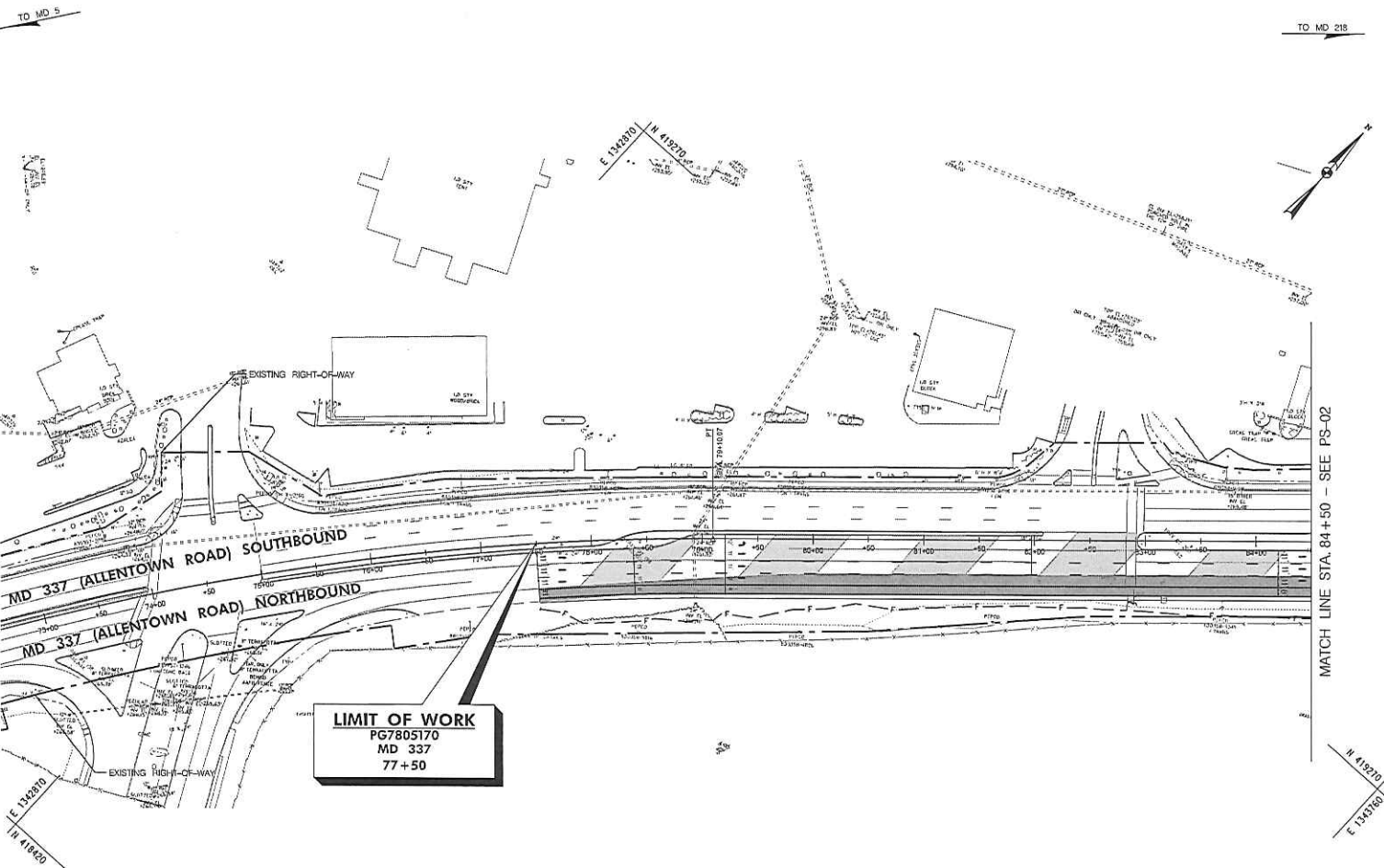
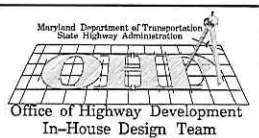
DEPUTY CHIEF OF DIVISION / CHIEF ENGINEER FOR PLANNING, ENGINEERING, AND DESIGN

SURVEY  
BOOK NO.

PGN-7000\_PG7805170  
Friday, April 13, 2012 at 7:07:21 PM

INDEXED

BY: ksladanta - Highway Design Division



DATUM: NAD 83/91 Horizontal  
NAVD 88 Vertical

ROADWAY LEGEND	R/W PLAT NUMBER	CROSS REFERENCE
FULL DEPTH RECONSTRUCTION		
GRINDING AND RESURFACING		
EXISTING SIDEWALK/PAVEMENT REMOVAL		
PORTLAND CEMENT CONCRETE		

ITEM	SHEET NO.
TYPICAL SHEET	01
SUPPLEMENTATION SHEET	02
W/F & DRAINAGE SCHEDULE	03
GEOMETRIC LAYOUT SHEETS	04
ROADWAY PLAN SHEETS	05/09
ROADWAY PROFILE SHEETS	10
TRAFFIC CONTROL SHEETS	11/12
CRUSH & SEPARATION CONTROL	13
GRADING & MARKING PLANS	14
LANDSCAPE PLAN SHEETS	15
UTILITIES	16

PLOTTED: 11/16/2010 10:00 AM  
FILE: PG7805170.dwg

QUANTITY NOTES

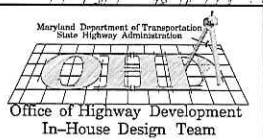
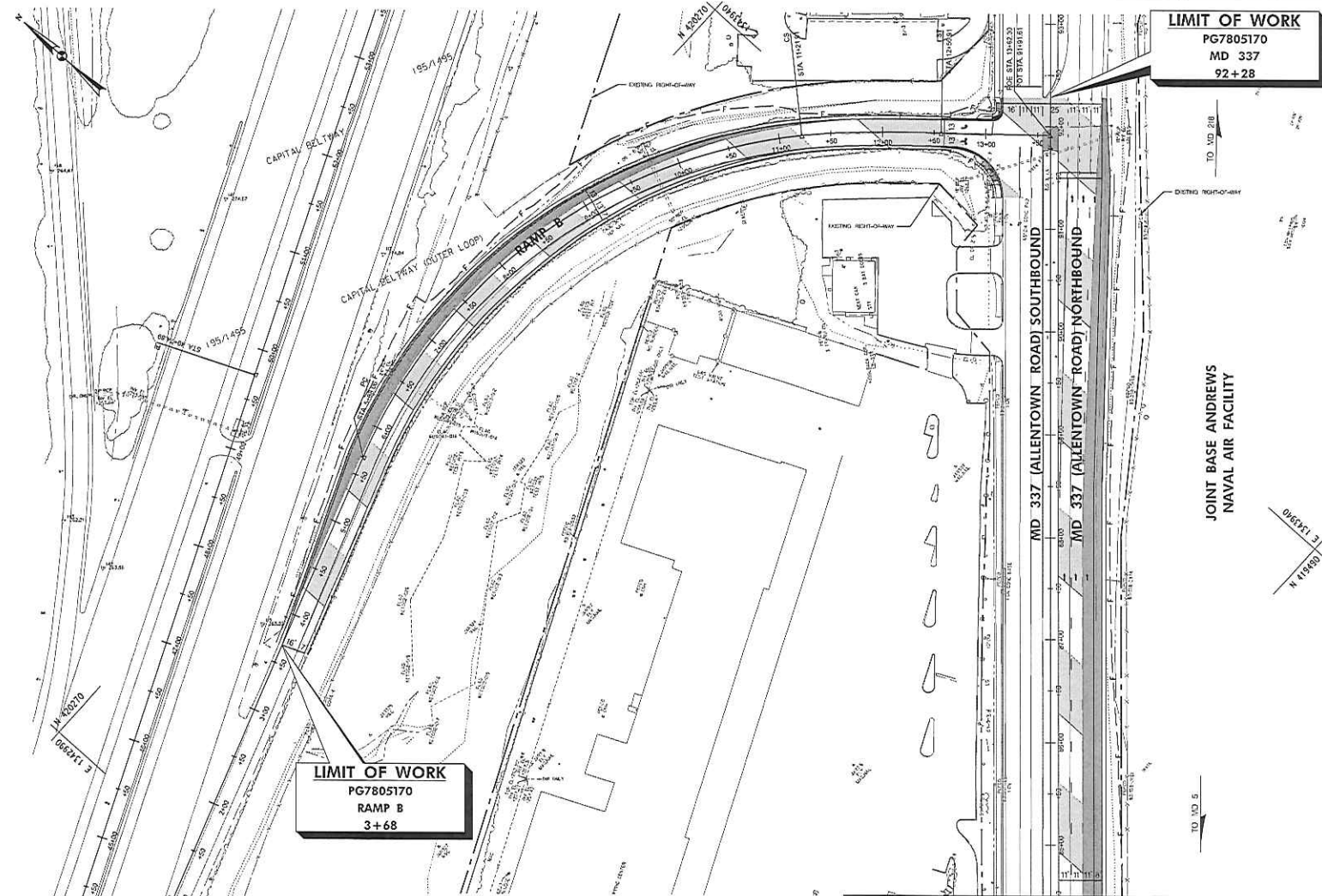
**SHA** STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
HIGHWAY DESIGN DIVISION  
MD 337 (ALLENTOWN ROAD) AT I-95 / I-95 NB OFF-RAMP  
BRAC INTERSECTION CAPACITY IMPROVEMENTS

#### ROADWAY PLANS

SCALE 1" = 50' ADVERTISED DATE TBD CONTRACT NO. PD080022  
DESIGNED BY KS COUNTY PRINCE GEORGE'S  
DRAWN BY KS LOOKING  
CHECKED BY PPK HORIZONTAL SCALE  
F.A.P. NO. SEE TITLE SHEET VERTICAL SCALE  
DRAWING NO. PS-01 OF 02 SHEET NO. 08 OF 16

QUANTITIES UNDER  
CONSTRUCTION

BY: kealdanha - Highway Design Division



ROADWAY LEGEND	R/W PLAT NUMBER	CROSS REFERENCE	REVISIONS
FULL DEPTH RECONSTRUCTION		ITEM	SHEET NO.
GRADING AND RESURFACING		TYPICAL SHEETS	
EXISTING SIDEWALK/PAVEMENT REMOVAL		SUPERELEVATION SHEETS	
PORTLAND CEMENT CONCRETE		W/F & DRAINAGE SCHEDULE	
		GEOMETRIC LAYOUT SHEETS	
		ROADWAY PLAN SHEETS	
		ROADWAY PROFILE SHEETS	
		TRAFFIC CONTROL SHEETS	
		GRADING & EROSION CONTROL	
		SIGGING & MARKING PLANS	
		LANDSCAPE PLAN SHEETS	
		UTILITIES	

QUANTITIES UNDER CONSTRUCTION

STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
HIGHWAY DESIGN DIVISION

MD 337 (ALLENTOWN ROAD) AT I-495 / I-95 NB OFF-RAMP  
BRAC INTERSECTION CAPACITY IMPROVEMENTS

ROADWAY PLANS			
SCALE: 1" = 50'	ADVERTISED DATE: TBD	CONTRACT NO.: PG000001	REVISIONS
DESIGNED BY: KS	COUNTY: BRUCE GEORGE'S	LOOMIS	
DRAWN BY: KS			
CHECKED BY: PPK			
F.A.P. NO.: SEE TITLE SHEET			
DRAWING NO. PS-02	OF 02	SHEET NO. 09	OF 16

PLotted: 1486x1486x1200 in 7/20/04 by  
TSL: pld4492\_KC04.dgn